Page 2

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

#### **Listing of Claims:**

Claims 1-57 (Canceled)

58. (New) A compound of the formula (I):

$$(I)$$

wherein:

R is selected from the group consisting of:

a linear or branched C<sub>2-6</sub>alkyl group, and a cycloalkyl group having from 3 to 9 carbon atoms,

which is unsubstituted or substituted with a group selected from the group consisting of: a cyano group; a hydroxyl group; a lower alkyl group optionally substituted with a hydroxyl group, a halogen atom or an amino group; a lower alkoxy group optionally substituted with a halogen atom; a halogen atom; a mono-lower alkylaminocarbonyloxy group; a di-lower alkylaminocarbonyloxy group; a mono-lower alkylaminocarbonyl group; a di-lower alkylaminocarbonyl group; a carbamoyl group; a cycloalkyliminocarbonyl group; and a trifluoromethyl group,

Y is selected from the group consisting of:

(1) a phenyl group, a pyridyl group and a pyrimidinyl group;

which may have 1 or 2 substituents selected from the group consisting of: a hydroxyl group; a lower alkyl group optionally substituted with a hydroxy group, a halogen atom or an amino group; a lower alkoxy group optionally substituted with a halogen atom; a lower alkylsulfonyl group; a cyclo-lower alkylsulfonyl group; a halogen atom; a mono-lower alkylaminocarbonyloxy group; a di-lower alkylaminocarbonyloxy group; a mono-lower alkylcarbamoyl group; a cycloalkyliminocarbamoyl group; a lactam ring; a mono-lower alkylamino group; a di-lower alkylamino group; an alkanoyl group; an alkoxycarbonylamino group wherein the nitrogen atom optionally substituted with a lower alkyl group; an alkanoylamino group wherein the nitrogen atom is optionally substituted with a lower

Page 3

alkyl group; and an alkylsulfonylamino group wherein the nitrogen atom is optionally substituted with a lower alkyl group;

(2) a bi-cyclic condensed ring selected from a group consisting of:
naphthyl, quinolinyl, indolyl, [1,2,4]-triazolo[4,3-a]pyridine and dibenzo[b,d]furan;
which may have 1 or 2 substituents selected from the group consisting of: a
hydroxyl group; a lower alkyl group optionally substituted with a hydroxy group, a halogen atom
or an amino group; a lower alkoxy group optionally substituted with a halogen atom; a lower
alkylsulfonyl group; a cyclo-lower alkylsulfonyl group; a halogen atom; a mono-lower
alkylaminocarbonyloxy group; a di-lower alkylaminocarbonyloxy group; a mono-lower
alkylcarbamoyl group; a di-lower alkylcarbamoyl group; a cycloalkyliminocarbamoyl group; a
lactam ring; a mono-lower alkylamino group; a di-lower alkylamino group; an alkanoyl group; an
alkoxycarbonylamino group wherein the nitrogen atom is optionally substituted with a lower
alkyl group; and an alkylsulfonylamino group wherein the nitrogen atom is optionally substituted
with a lower alkyl group;

# (3) a thienyl group;

which may have 1 or 2 substituents selected from the group consisting of: a hydroxyl group; a lower alkyl group optionally substituted with a hydroxy group, a halogen atom or an amino group; a lower alkoxy group optionally substituted with a halogen atom; a lower alkylsulfonyl group; a cyclo-lower alkylsulfonyl group; a halogen atom; a mono-lower alkylaminocarbonyloxy group; a di-lower alkylaminocarbonyloxy group; a mono-lower alkylcarbamoyl group; a cycloalkyliminocarbamoyl group; a lactam ring; a mono-lower alkylamino group; a di-lower alkylamino group; an alkanoyl group; an alkoxycarbonylamino group wherein the nitrogen atom is optionally substituted with a lower alkyl group; and an alkylsulfonylamino group wherein the nitrogen atom is optionally substituted with a lower alkyl group; and an alkylsulfonylamino group wherein the nitrogen atom is optionally substituted with a lower alkyl group;

#### (4) a piperidinyl group;

which may have 1 or 2 substituents selected from the group consisting of: a hydroxyl group; a lower alkyl group optionally substituted with a hydroxy group, a halogen atom or an amino group; a lower alkoxy group optionally substituted with a halogen atom; a halogen atom; a mono-lower alkylaminocarbonyloxy group; a di-lower alkylaminocarbonyloxy group; a mono-lower alkylaminogroup; a di-lower alkylaminogroup; a cycloalkyliminocarbamoyl group; a lactam ring; a mono-lower alkylamino group; a di-lower alkylamino group; an alkanoyl

Page 4

group; an alkoxycarbonylamino group wherein the nitrogen atom is optionally substituted with a lower alkyl group; an alkanoylamino group wherein the nitrogen atom is optionally substituted with a lower alkyl group; and an alkylsulfonylamino group wherein the nitrogen atom is optionally substituted with a lower alkyl group;

# (5) a group of the formula (IV-2):

$$---(CH_2)-N$$
(IV-2)

and

### (6) a group of the formula (Q1-1):

wherein R<sup>7</sup> represents a hydrogen atom, a lower alkyl group, a cyclo-lower alkyl group, a halo-lower alkyl group, or an aralkyl group;

or a pharmaceutically acceptable salt thereof.

59. (New) The compound of Claim 58, wherein R in formula (II) is a cycloalkyl group having from 3 to 9 carbon atoms;

which is unsubstituted or substituted with a group selected from the group consisting of: a cyano group; a hydroxy group; a lower alkyl group optionally substituted with a hydroxy group, a halogen atom or an amino group; a lower alkoxy group; a monolowere alkylaminocarbonyloxy group; and a di-lowere alkylaminocarbonyloxy group.

60. (New) The compound of Claim 58 wherein R is selected from the group consisting of:

cyclopropyl, cyclobutyl, cyclopentyl and cyclohexyl.

Page 5

61. (New) The compound of Claim 58 wherein Y is a group of the formula (Q1-1):

(Q1-1)

wherein R<sup>7</sup> represents a hydrogen atom, a lower alkyl group, a cyclo-lower alkyl group, a halo-lower alkyl group, or an aralkyl group.

62. (New) The compound of Claim 58 wherein Y is selected from the group consisting of:

1H-pyridin-2-on-5-yl,

1H-pyridin-2-on-1-yl,

1-cyclopentyl-1H-pyridin-2-on-3-yl,

1H-pyridin-2-on-4-yl,

1-methyl-1H-pyridin-2-on-4-yl,

1-difluoromethyl-1H-pyridin-2-on-4-yl,

1-ethyl-1H-pyridin-2-on-4-yl,

1-methyl-1H-pyridin-2-on-5-yl,

1-(2,2-difluoroethyl)-1H-pyridin-2-on-4-yl, and

1-(2-fluoroethyl)-1H-pyridin-2-on-4-yl.

- 63. (New) A compound which is selected from the group consisting of:
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(4-cyanophenyl)pyrimidine,
- 2-(1-isopropylpiperidin-4-yloxy)-5-(4-cyanophenyl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{(3-methyl-1,2,4-oxadiazol-5-yl)phenyl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(4-cyanophenyl)pyrimidine,
- 2-(1-(cyclobutylpiperidin-4-yloxy)-5-(4-cyanophenyl)pyrimidine,
- 2-(1-cyclohexylpiperidin-4-yloxy)-5-(4-cyanophenyl)pyrimidine,
- 2-(1-cyclopropylpiperidin-4-yloxy)-5-(4-cyanophenyl)pyrimidine,
- 2-(1-ethylpiperidin-4-yloxy)-5-(4-cyanophenyl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{4-(pyrrolidin-1-ylcarbonyl)phenyl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{4-(dimethylcarbamoyl)phenyl}pyrimidine,

Page 6

```
2-(1-cyclopentylpiperidin-4-yloxy)-5-{4-(morpholin-4-ylcarbonyl)phenyl}pyrimidine,
```

- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{4-(phenoxy)phenyl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(3-quinolinyl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(5-indolyl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(1H-pyridin-2-on-1-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(piperidin-2-on-1-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(8-quinolinyl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(4-phenyl-4-hydroxypiperidin-1-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(2-methoxypyridin-5-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(4-chlorophenyl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(4-trifluoromethylphenyl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(pyridin-3-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(4-methoxyphenyl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(dibenzofuran-4-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(2-cyclopentyloxypyridin-5-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(1H-pyridin-2-on-5-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(1-cyclopentyl-1H-pyridin-2-on-3-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{2-(pyrrolidin-1-ylcarbonyl)pyridin-5-yl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(2-cyano-5-thienyl)pyrimidine.
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{4-(morpholin-3-on-4-yl)phenyl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{4-(2-oxazolidin-3-yl)phenyl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(2-methylpyridin-5-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(2-fluoropyridin-5-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{4-(1H-pyridin-2-on-1-yl)phenyl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{4-(methylsulfonyl)phenyl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{4-acetylphenyl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(4-trifluoromethoxyphenyl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{4-(2-hydroxy-2-propyl)phenyl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(2-ethylpyridin-5-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(piperidin-1-ylcarbonyl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(piperidin-1-ylmethyl)phenyl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(4-phenylpiperazin-1-ylmethyl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(2-cyanopyrimidin-5-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(1H-pyridin-2-on-4-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(1-methyl-1H-pyridin-2-on-4-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(2-difluoromethoxypyridin-4-yl)pyrimidine,

Page 7

2-(1-cyclopentylpiperidin-4-yloxy)-5-(1-difluoromethyl-1H-pyridin-2-on-4-yl)pyrimidine,

- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{4-(N-methyl-N-methoxycarbonylamino)phenyl}-pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(1-ethyl-1H-pyridin-2-on-4-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(1-methyl-1H-pyridin-2-on-5-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(1-ethyl-1H-pyridin-2-on-5-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(2-methylimidazo[1,2,a]pyridin-6-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(2-carbamoylpyridin-5-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{1-(2,2-difluoroethyl)-1H-pyridin-2-on-4-yl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(1,2,4-triazolo[4,3,a]pyridin-7-yl)pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-(1,2,4-triazolo[4,3,a]pyridin-6-yl)pyrimidine,
- 2-(1-cyclobutylpiperidin-4-yloxy)-5-(1-difluoromethyl-1H-pyridin-2-on-4-yl)pyrimidine,
- 2-(1-cyclobutylpiperidin-4-yloxy)-5-{1-(2-fluoroethyl)-1H-pyridin-2-on-4-yl}pyrimidine,
- 2-(1-cyclopentylpiperidin-4-yloxy)-5-{1-(2-fluoroethyl)-1H-pyridin-2-on-4-yl}pyrimidine, or a pharmaceutically acceptable salt thereof.
- 64. (New) A pharmaceutical composition which comprises an inert carrier and the compound of Claim 58, or a pharmaceutically acceptable salt thereof.
- 65. (New) A pharmaceutical composition which comprises an inert carrier and the compound of Claim 63, or a pharmaceutically acceptable salt thereof.